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ABSTRACT

An integrative causal process model of evaluation utilization variables is presented. The model was developed through a traditional approach to literature review that lists results from published studies and relates these to the research topic, and through an approach that tries to integrate the models found in the literature search. Meta-modeling means developing models from models. It is a non-quantitative inductive theory-building approach done on published research studies as a specific source of data. Variables that affect utilization were identified, and implicit-cause and explicit-cause models in the literature were located. Reviewing these implicit and explicit models identifies the following key variables as facilitators of utilization: (1) participation; (2) organizational process and communication; (3) feedback; (4) politics and self-interested decision making; (5) use management; and (6) cognitive and behavioral uses. Evaluation usage is a continual process that evolves and changes shape over time, which is dependent on local contextual, organization, and political dimensions, in which participation by stakeholders and feedback seem especially useful. The proposed model is presented in Figure 7. Six additional figures illustrate the discussion. Contains 74 references. (SLD)

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MODELS OF EVALUATION UTILIZATION: A META-MODELING SYNTHESIS OF THE LITERATURE

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Several key themes have emerged from debates in the evaluation literature during the past ten or fifteen years that have implications for current conceptions of utilization. The first debate surrounds the issue of evaluation as a summative product versus evaluation as a "theory driven" process and product. It has been suggested that evaluation without "theory" is like evaluating a "black box" (Chen & Rossi, 1980, 1987, 1989, 1992); therefore, these authors contend, the theory driven approach is needed. This approach involves developing "models" of programs so that 1) the internal dynamics of a program can be understood, and 2) generalizable evaluation theory can be developed. Recent thinking in the utilization literature seems to be moving in the direction of theory-driven evaluation (Chen, 1990; Chen & Rossi, 1989; Huberman, 1987; Huberman & Cox, 1990).

The second debate surrounds the issue of instrumental use versus enlightenment; the former means using evaluation results to make concrete decisions about a specific program, and the latter means changing one's thinking about programs. The most prominent advocates of these positions are, respectively, Patton (1986, 1988), who suggests that a great deal of instrumental use does occur, and Weiss (1984, 1988), who suggests that most evaluation use occurs over the long-term after any single evaluation has long past. Current "resolution" of this issue suggests that both kinds of evaluation occur and both are important (Alkin, 1990).

Another debate surrounds the issue of the "social responsibility" of an evaluator. It has been suggested that decisions about programs should come from managers and policy-makers, not evaluators (e.g., Wholey, 1983; Patton, 1986; Shadish, Cook, & Leviton, 1991). In this tradition, the evaluator becomes an expert who provides information but does not tell policymakers what to do with it. Shadish et al. (1990), calling evaluation theory which advocates a value position "prescriptive theory," also contend that value positions "should" be avoided.

Others have suggested that an evaluator has a social responsibility when offering recommendations. For example, Scriven would contend that the

evaluator has a moral responsibility to act in the interest of a "better society," in particular, a society with a lower degree of income and wealth inequality (Scriven, 1983). Furthermore, advocates of the qualitative evaluation paradigm (as contrasted with the positivist paradigm) have argued for the realization that evaluation always involves some kind of value judgement. These kinds of issues about valuing and questions about who makes the decisions are important to researchers in the utilization literature. Specifically, directing attention to the evaluator's role and approach has implications for who and how results are utilized.

Another debate is about stakeholders' roles in the evaluation process. Patton has long contended that certain people in an organization should work closely with the evaluator and act as advocates for the evaluation in the organization (Patton, 1978, 1986). These advocates will usually be high level decision makers. Wholey has argued for getting managers more involved and, essentially, learning to "manage for use"; furthermore, if an evaluation has little chance of being used then Wholey would say "don't do it" (Wholey, 1983). Alkin, points to the importance of "primary users" (1991). As can be seen in these views, currently, "participatory" evaluation approaches are viewed with high esteem, and participation is viewed as one of the key influences on stakeholder satisfaction and utilization (Cousins & Earl, 1992).

One might surmise from this review that the utilization literature is dynamic, but, at the same time, the following question can be asked: do we know more today about utilization than we did ten years ago? While the answer seemingly is "yes," this does not mean that the relative importance of variables related to utilization is known, or that the degree of utilization can be predicted with much accuracy. <u>One problem is that while there are many lists of variables known to affect utilization, there are not many models of evaluation utilization that integrate variables into systems, showing their interrelationships</u>. It appears, therefore, that there is a need for additional research which integrates past literature and offers more holistic findings and predictions. New research should address this need.

One way to meet this need in the utilization literature is by developing integrative cause models. Causal process models should be a welcome addition to the literature as researchers attempt to order the variables that affect utilization. In other words, rather than just suggesting that single variables affect utilization, it would be helpful if researchers looked for strings of variables, showing indirect effects and intervening mechanisms.

Integrative models should also help advance utilization theory by beginning to explain how the utilization variables operate together. Models should help evaluators communicate what is known about evaluation use in a more holistic way, which may increase the use of research findings. In time, explanatory models with greater predictive power might be developed. It is contended here, therefore, that modeling of utilization variables is the next logical for the evaluation utilization literature. It is the purpose of this paper, therefore, to offer an integrative causal process model of the utilization variables.

Two approaches to reviewing the literature were used in developing the integrative causal process model. First, the traditional approach which lists results from various published studies and relates these studies to the research topic was used. The second approach, which was especially relevant for this study, looks for published theoretical or empirical models and tries to integrate these models; this second approach is called, here, meta-modeling. The section below called "Variables that Affect Utilization" follows the traditional approach; the section below called "Models of Evaluation Utilization" follows the meta-modeling approach which is reviewed next.

Meta-Modeling

It is contended here that additional and more systematic attempts at modeling can be made from other models in the existing literature. Meta-modeling, as term is used here, means developing models from models. Describing this methodology is seen as important so that, perhaps, the

beginning of a more rigorous methodology can be developed. Such a methodology for developing models from models is rarely, if ever, discussed in current social science methods texts.

Meta-modeling is a non-quantitative, inductive theory building approach done on a specific a data source--published research studies. Specifically, implicit cause-models are constructed (i.e., models constructed from ideas described in previous research studies), and explicit cause-models are located (i.e., already depicted models). Then, systems of concepts, categories, and variables are pulled from the implicit and explicit models and integrated into a new (holistic) model. In short, the output of meta-modeling is another model.

After an initial meta-model is developed, the process continues iterating until the researcher is satisfied that the "best" model had been obtained. During this process, new variables are added and others may be deleted. The researcher refines the model by returning to the literature and examining the models in a new light; he or she may also, at this point, see a need to look at models that were not considered relevant during earlier runs. Each time the meta-model is changed, it is checked for its "fit" with empirical results in the literature and with the developing theory. During the process, one can try variables at different levels of abstraction. In the present study, the original model had too many variables; hence, a smaller, more abstract model was developed which still retained much of the meaning of the more complex model--in short, the model was more parsimonious.

The meta-modeling approach has some similarities with the type of traditional theory building called "causal modeling" in that models are developed from previous theory (e.g., Asher, 1983; Davis, 1984; Miles & Huberman, 1984). The traditional criteria for causality are followed: association or covariation (to establish relationship between variables), temporal order (to establish direction of causality), and elimination of alternative explanations or "third variables" (to establish that the variables are causally related rather than spuriously related). The approach also draws

upon the grounded theory approach, recently succinctly rearticulated by Strauss and Corbin (1990); the strategy in both grounded theory and meta-modeling is to search for categories, to describe their properties and dimensions, and to attempt to order the categories; as a result, the meta-modeling approach produces models "grounded" in the literature. For a more detailed description of the grounded theory approach see Strauss and Corbin (1990). Meta-modeling also has some similarities with the technique called "meta-ethnography" where ethnographers construct integrative ethnographies based on other published ethnographies (Noblit & Hare, 1988).

Variables that Affect Utilization

In an another paper by the present author (Johnson, 1992a) over 100 variables affecting utilization were identified. Rather than list all of these variables here, the reader is directed to the two published literature reviews that are currently available (Leviton & Hughes, 1981; Cousins & Leithwood, 1986). The variables listed here are categorized by typologies.

Boyer (1989) categorizes the utilization variables into seven categories. These categories are: perceived relevance, timeliness, extent and quality of communication, credibility, presentation of findings, advocacy by a key individual, and political considerations (Boyer, 1989; Boyer & Langbein, 1991). Boyer, and Langbein, developed these categories especially for decision making in congress and the federal bureaucracy. Information obviously has to reach members of congress and their aids before a particular law is voted on (instrumental use). Credibility is also important so that decisions, often politically motivated, can be justified and defended (i.e., a sort of symbolic use) (Chelimsky, 1987).

Cousins and Leithwood (1986) developed a model of sorts which is reviewed in the next section. Here, their frequently cited categorization of utilization variables is shown for comparison purposes. They categorize the utilization variables into two sets. Set one is called "evaluation implementation" and includes: evaluation quality, credibility, relevance,

communication quality, findings, and timeliness. Set two, called "decision or policy setting" variables, includes: information needs, decision characteristics, political climate, competing information, personal characteristics, and commitment and/or receptiveness to evaluation. One advantage of the Cousins and Leithwood article, compared to Boyer (1989), was the use of the two factor categorization scheme.

The Leviton and Hughes (1981) typology is as follows: 1) relevance of evaluation to needs of potential users, 2) extent of communication between potential users and producers of evaluations, 3) translation of evaluations into their implications for policy and programs, 4) credibility or trust in evaluations, and 5) commitment or advocacy by individual users.

It is readily seen that there is a good deal of overlap in the three typologies just given. Four weaknesses of the typologies are noted: 1) organizational characteristics were given little weight, 2) stakeholder participation was not emphasized, 3) no ordering of the categories was attempted, and 4) "organizational learning" was ignored. In the present research, ordering of variables is a major goal. Furthermore, participation and organizational learning are key elements in the theoretical framework used.

Models of Evaluation Utilization

Next some models are drawn from the evaluation utilization literature. First, implicit cause-models were identified and, from these, explicit models were constructed. A key literature source for these implicit models was the excellent evaluation theory text by Shadish et al. (1991); these authors have detailed chapters on the thought of Campbell, Scriven, Weiss, Wholey, Stake, Cronbach, and Rossi. Models were constructed for these seven theorists. After discussing the implicit models, explicit cause-models found in the utilization literature are reviewed.

The first theorist who has an implicit cause-model is Donald Campbell. Campbell believes that the major responsibility for use of evaluations lies in

the political process not the evaluator. Over time, his "evolutionary epistemology" predicts, better programs will survive and society will be improved (Campbell, 1969, 1984). The evaluator is like a "scientist" conducting evaluations with the best methods possible (especially experiments); she/he does not, however, directly promote the use of findings. Overall, Campbell offers little for a modern theory of utilization; instead, he assumes that it will "just happen." Nonetheless, a depiction of Campbell's ideas might look like the following:

```
Program evaluation --> Consideration by --> Instrumental
report                 policy-makers        Use
and                    along with
reports of             other
past programs          information
```

Michael Scriven, like Campbell, does not offer an explicit theory of use. Scriven (1983) advocates a "consumer reports" type model of evaluation, where the evaluator examines the comparative strengths and weaknesses of a program and makes a final summative judgement of worth--is the program "good" or is the program "bad?" He seems to assume that programs are like products, and that consumers will examine strengths and weaknesses and make rational choices. However, his model may not apply very well to program evaluation (as contrasted with product evaluation). For example, the public sector promotes interest group participation in judging actual programs; it's a political process involving multiple interests, and which program evaluation is utilized at any given time is not always predictable. In other words, multiple stakeholders may simply not "buy" the either/or logic of consumer product evaluations. To Scriven's credit, he does advocate comparative evaluations in decision making. (One might also question his advocacy of summative rather than formative evaluation.)

A depiction of Scriven's implicit-cause-model might look like this:

```
Program          ----->  Final Summative   ------>
Implementation           Evaluation Report

      Marketplace of  ----> Usage by People
      Ideas and             Interested in
      Information           the Program/Product
```

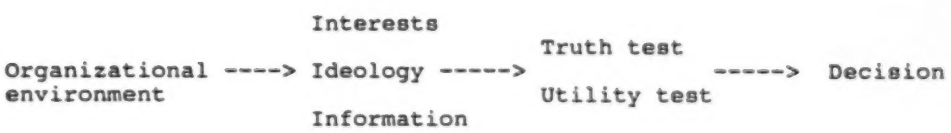
Carol Weiss (1984), perhaps more than any other prominent theorist believes that little or no instrumental use ever occurs -- most use, she contends, is through enlightenment. She has recently backed down slightly about the lack of occurrence of instrumental use (see, Alkin, 1990). Over time decision accretion takes place; that is:

> Policies are not made at a single point in time; they seen to happen as the result of gradual accretions, the build-up of small choices, the closing of small options and the gradual narrowing of available alternatives (cited in Shadish 1991: p.192; also see Weiss, 1980a).

This kind of use is very difficult to measure because it is conceptual; it is not tangible.

Weiss (1983) does offer a very interesting implicit cause-model of decision making at the individual level of analysis called "I-I-I Analysis." She says decisions are the result of three major influences: 1) information, 2) ideology, and 3) interests. The influence of these three factors is tempered by the organizational environment in which the person resides (Alkin, 1990). Furthermore, when making a decision, decision makers conduct "truth tests" (i.e., it conforms to prior knowledge) and "utility tests" (i.e., is the evaluation feasible and action oriented?) (Weiss, 1980b).

A more explicit depiction of the process described by Weiss might look like:



Joseph Wholey, unlike Weiss, developed a more detailed theory of instrumental use; in this theory it is suggested that evaluation should directly serve the needs of management (Wholey, 1983, 1985). If the potential for use of an evaluation does not exist (which he would determine from an "evaluability assessment") then the evaluation should not be done. Wholey (1985) offers advice on how to manage programs and how to use evaluative information as part of management. In other words, his focus is on instrumental use (i.e., immediate tangible use) through effective management.

He does not question whether a program meets social needs or not--he allows managers and policy-makers to make that decision. Wholey's focus is on program improvement and effective management, and it is the evaluator's job to work with management to improve programs. His approach to management quite compatible with modern organization development theory (Harvey & Brown, 1992; Carnall, 1990).

Wholey rarely recommends use of the rigorous experimental methods advocated by Campbell. Programs are characterized by limited resources and purposes. Wholey (1979), therefore, recommends a "sequential purchase of information." This involves, in order of increasing expense, the following:

1. Evaluability assessment
2. Rapid feedback assessment
3. Performance monitoring
4. Intensive evaluation

Each of these could probably be modeled. In general, however, a model of Wholey's ideas about evaluation use might look like the following:

Evaluability assessment --> evaluation implementation --> Change in managers' performance --> Continuous instrumental use

Robert Stake is epistemologically and ontologically a qualitative researcher, e.g., he is a relativist. His specific methodology is the case study (Stake, 1981). His approach to evaluation, called "responsive evaluation," basically means orienting evaluations to program activities and stakeholders' needs (Stake, 1975). Through a kind of participatory approach to evaluation, a qualitative report using detailed description is produced. The evaluator tells a story, and after reading this story (i.e., the report), readers are supposed to able to make naturalistic generalizations (Stake, 1990). That is, readers are said to vicariously experience a program and then generalize, based on their experience, to other environments, people, and programs. It is noted that this is a kind of conceptual use. The explicit cause-model developed from Stake's implicit cause-model of usage is depicted as follows:

Qualitative --> Vicarious --> Understanding --> Naturalistic -->
evaluation experience generalizations
(case study)

---> Conceptual
Use

As shown in the model, Stake believes that use of a case study methodology ultimately increases evaluation utilization.

In contrast to Donald Campbell, Lee Cronbach believes that complex interactions should be used to describe the nature of reality and that it is the evaluator's job to show in detail the processes going on in a program; the main reason for doing this is generalization. For example, Cronbach talked about aptitude-treatment-interactions and multiple-variable interactions (Cronbach, 1957). He contends that 3, 4, 5 or greater interactions are necessary for describing the social world (Cronbach & Snow, 1977). Cronbach wants to look at processes going on in a program, and he wants to be able to generalize to other, sometimes dissimilar programs, people, and places. (called *UTOS) (Cronbach et al., 1980, 1982).

Cronbach contends that a major purpose of evaluation is for conceptual use (or enlightenment). The evaluator may wish to reveal findings to stakeholders continuously during an evaluation (Cronbach et al., 1980) The evaluator should "hang around" an evaluation site. In general, results should decrease stakeholder uncertainty about the operation of the program; the evaluator is to carry out an "education" role. Because much use of evaluation occurs in the long term for programs other than the one being evaluated, programs will benefit most from accumulated theoretical knowledge. Finally, Cronbach has advocated the use of "standing committees of experts" to synthesize findings from evaluation research.

A tentative depiction of Cronbach's implicit-cause-model of utilization is as follows:

Analysis of -> Program --> Continuous -> Formative -> Long term
background Develop- Feedback use Conceptual
theoretical ment and use
literature modification
of program
and evaluation
questions

Rossi, according to Shadish et al. (1991), essentially has no theory of use. They say:

> The Leviton and Hughes (1981) conceptualization of use seems tacked on to Rossi's theory of practice as an afterthought....Rossi may not mean to discount the value of instrumental use, but his lack of clarity about when it should be pursued leaves him vulnerable to such criticism (pp.423-424).

They further suggest that Rossi's (and Chen's, 1983) theory-driven-approach to evaluation "subordinates user information needs to social science theory needs" (Shadish et al., 1991:p.423).

It is contended here that Rossi does have an implicit theory of use. Perhaps it is not well developed, but part of his program model does refer to use. To increase use, Rossi suggests that evaluators "tailor" evaluation activities to local needs (Rossi & Freeman, 1989). In general, how this is done depends on the stage and kind of program that is being evaluated. This process of "fitting evaluations to programs" can be viewed as an approach to increasing evaluation usage. Apparently if one were to conduct the wrong type of evaluation it would be "useless." Further, it is predicted that Rossi would suggest that forming a congruence between evaluation and need fosters usage. Finally, Rossi's calls for using <u>theory</u> can also be seen as facilitating evaluation use because it allows one to know what is going on in the "black box" and, therefore, to do something about the operation of the program.

A tentative depiction of Rossi's ideas is as follows:

Do your homework, i.e., review literature on similar programs	--> Work with program managers and develop program model	--> Collect Data	--> Compare model with reality	--> modify program based on findings (instrumental use)

One last implicit cause-model from the evaluation utilization literature was developed from a 1984 paper by Carol Weiss. Weiss presented her ideas in the matrices shown in Figure 1 on the next page.

FIGURE 1

	Intellectual/ Cognitive Domain	Social/Structure Domain
From Policy to Evaluation Formulation	A Specification of the evaluation problem	B Institutional pressures on policy makers and evaluators that affect specification
From Evaluation Findings to Action	C Interpretation of evaluation findings	D Application of evaluation to policy

(From Weiss, 1984)

	Intellectual/ Cognitive Domain	Social/Structure Domain
From Policy to Evaluation Formulation	A Plan with users in mind Stay close to the scene	B Plan with users Concentrate on manipulable variables
From Evaluation Findings to Action	C Clear well-written report Dissemination: get the results out Evaluation synthesis High quality research	D Translate findings into recommendations Make recommendations feasible to implement

(From Weiss, 1984)

After dividing the evaluation process into roughly three stages (including: 1) evaluation formulation, 2) conduct of the study, and 3) implications for decision), Weiss suggests that evaluators can make the largest impact during the first and third stages. She contends that there are two major obstacles to use: 1) intellectual and 2) social and structural. In the first matrix, Weiss shows the problems or issues that occur for the first and third stages crossed with the two obstacles. In the second matrix, she lists what an evaluator can do and <u>when</u> he or she should do it. This process might be modeled as follows:

I. Intellectual/Cognitive Domain

Stakeholder participation in planning and specification of problem	---->	Evaluator conducts the study	----->	Evaluator writes clear report	-->	Use
(Evaluation formulation)		(Conduct of the study)		(Implications for decisions)		

II. Social/Structural Domain

Concentrate on manipulable variables	---->	Evaluator conducts the study	----->	Evaluator translates findings into recommendations	-->	Use
(Evaluation formulation)		(Conduct of the study)		(Implications for decisions)		

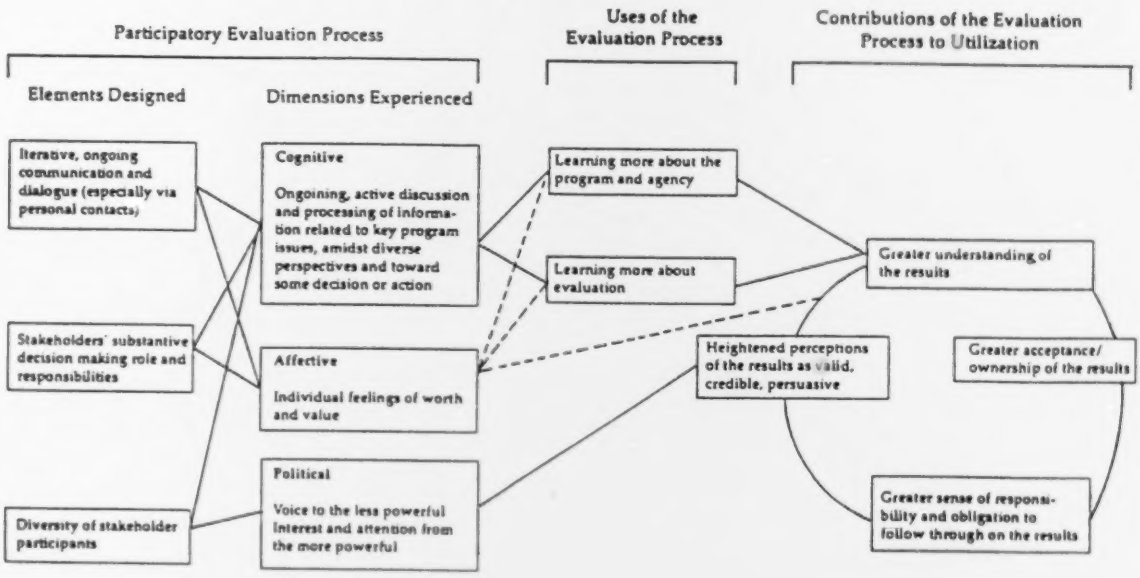
None of the models reviewed so far has been empirically tested using causal modeling techniques (to my knowledge). In fact, the authors have not used schematics to depict their models; their models are what have been called implicit cause-models in the present study. In an implicit cause-model, a process is implied, but, generally, is not directly discussed or depicted. Some more explicit and empirical models that have appeared in the literature now follow.

A commonly cited model of evaluation utilization was developed by Jennifer Green (1988; shown in Figure 2). She also empirically tested the model using a qualitative methodology (i.e., two field studies). She studied two local program evaluations--a youth employment program and a day-care information and referral program. She suggested that stakeholder participation is an effective way to promote evaluation use. Based on the program data, Green categorized stakeholders into three groups: 1) VIPs (very involved person), 2) SIPs (somewhat or sometimes involved person), and 3) MIPs (marginally involved person). According to the participatory approach, a major goal for the evaluation is to get people as involved as possible as soon a possible; hence, VIPs are to be desired (Green, 1988).

As can be seen in Figure 2, Green views participatory evaluation as a

three stage process: 1) the "participatory evaluation process," 2) "uses of the evaluation process," and 3) the "process of utilization." Elements in stage one are said to affect elements in stages two and three; elements in stage two are said to affect the "greater understanding" part of the stage three utilization process. One interesting feature of this model is that it includes indirect effects. Also, it operationalizes utilization as a process. It would be interesting, possibly, to further test this model (i.e., verify it) using quantitative and qualitative modeling techniques.

FIGURE 2

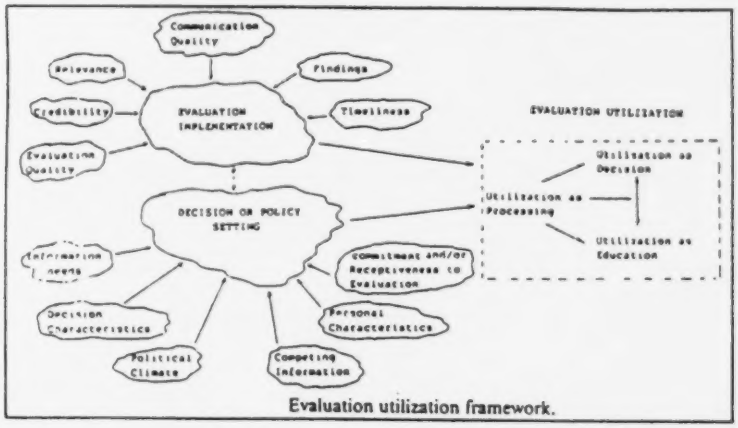

Participatory Evaluation Process
Uses of the Evaluation Process
Contributions of the Evaluation Process to Utilization
Elements Designed
Dimensions Experienced
Iterative, ongoing communication and dialogue (especially via personal contacts)
Stakeholders' substantive decision making role and responsibilities
Diversity of stakeholder participants
Cognitive
Ongoining, active discussion and processing of information related to key program issues, amidst diverse perspectives and toward some decision or action
Affective
Individual feelings of worth and value
Political
Voice to the less powerful interest and attention from the more powerful
Learning more about the program and agency
Learning more about evaluation
Heightened perceptions of the results as valid, credible, persuasive
Greater understanding of the results
Greater acceptance/ ownership of the results
Greater sense of responsibility and obligation to follow through on the results

Another utilization model from the evaluation utilization literature was done by Cousins and Leithwood (1986; see Figure 3). Because the article in which the model appears is a literature summarization, the data for the model are from previous research studies. Basically, the model divides twelve utilization factors into two more abstract factors called "evaluation implementation" and "decision or policy setting."

In the model, these two abstract factors are shown to influence the utilization process (which involves three variables). In other words, this

model can be viewed as including two latent independent variables (each measured by six variables) which directly influence the evaluation utilization process. This model has not been empirically verified on primary data.

FIGURE 3



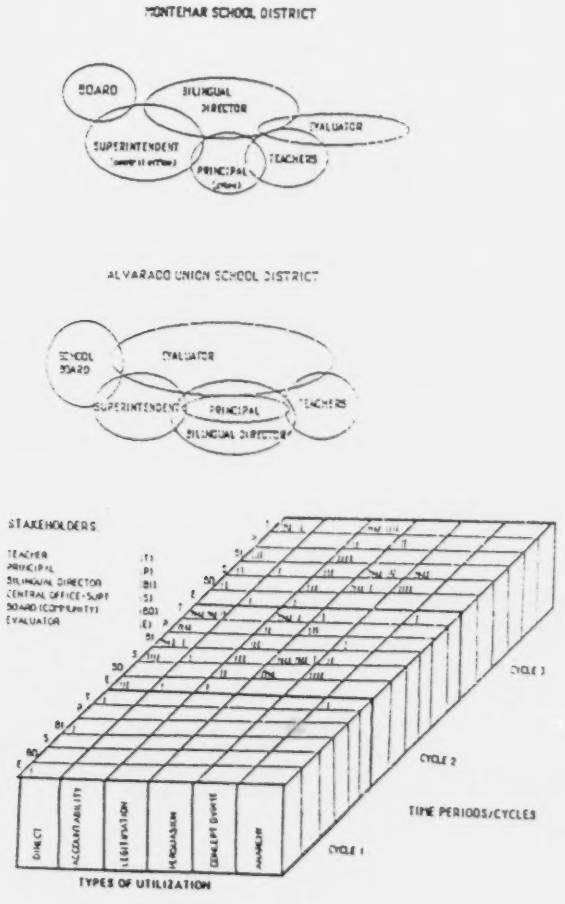
Evaluation utilization framework.

Another set of models is given by Jean Wollenberg (1986; see Figure 4). Wollenberg studied the use of evaluation in two school districts using field work methodology over an extended period (i.e., a complete school year). In this study, extensive qualitative data were collected. The data were analyzed in three ways: 1) using Alkin's 1979 categories, 2) through "forms of use" (including direct use, legitimative use, persuasive use, conceptual use, and anarchic use), and 3) through "time periods/cycles of program implementation/growth" (i.e., data were categorized into the three cycles, in effect creating a time-process variable). The three cycles of program growth include a conceptual stage, a developmental stage, and an institutional stage.

Another interesting model developed by Wollenberg (1986; see Figure 4), is useful because it depicts the influence of two different kinds of organizational structures on utilization. The two structures are, first, a "loosely-coupled" system (i.e., a decentralized, bottom up system) and, two, a more tightly controlled, but smaller, system (i.e., a more traditional bureaucratic hierarchial form). In the loosely coupled system the evaluator

communicated mainly with a bilingual director and teachers (see diagram for Montemar School District); the bilingual director played a "gatekeeping" role (i.e., deciding who obtains information about the evaluation). In the "tighter" district (i.e., Alvarado Union School District), the evaluator was the gatekeeper, and, hence, communicated with all of the major stakeholder groups. The main use of these two models is, I believe, in showing <u>who communicates with whom in the overall organization</u>; this structural variable (i.e., coupling) affects communication, which affects utilization (note the implied cause model).

Figure 4



Boyer and Langbein (1991) carried out a quantitative study using multiple regression analyses to compare the importance of variables known, from previous literature, to influence utilization. These researchers examined utilization of evaluation reports by members of congress and key congressional staff-persons. Recommendations was the unit of analysis. The authors suggested that factors operating in a legislative environment are unique to that environment, i.e., not operating in other environments such as educational, business, or, in other branches of the federal government (i.e., executive and judicial); hence, the purpose of the study. The study was based on a sample size of 100 congressional staff who had direct evaluation-use experience.

The results were based on regression equations. Remember, <u>when using multiple regressions for explanatory purposes, one is in effect using a model of direct effects</u>, i.e., it is hypothesized that each of the explanatory variables has a direct effect on the outcome variable (controlling for the other explanatory variables). Before conducting the regression analyses, Boyer and Langbein found that all of the independent variables had significant <u>bivariate</u> relationships with utilization. As seen in the regression tables in the Boyer et al. article, some of the explanatory variables which were important were:

--Character of the timing,
--Clarity,
--Absence of a detractor,
--Communication,
--Clarity,
--Relevance to Congress,
--Credibility of methodology, and
--Reputation of performer.

Another quantitative study of evaluation utilization was done by William Johnston for his dissertation (Johnston, 1986; also Johnston, 1988). In this study, Johnston drew arrows depicting his assumption of direct effects. One model was as follows:

Johnston reported nine empirical models in his dissertation; for each model, he changed one or more of the outcome or explanatory variables. The above model is given only as an example.

Johnston found that "type of change" was the best predictor of evaluation utilization. In order from easiest to achieve utilization to hardest, the change dimensions were:

-- behavior changes
-- changes in rules
-- organizational structure changes
-- changes in goals and purposes.

The other two variables found to be significant predictors of utilization were influence (i.e., pressure from politically powerful external agencies) and study methodology (e.g., conceptualization, generalizability, reliability and validity, use of literature, etc.).

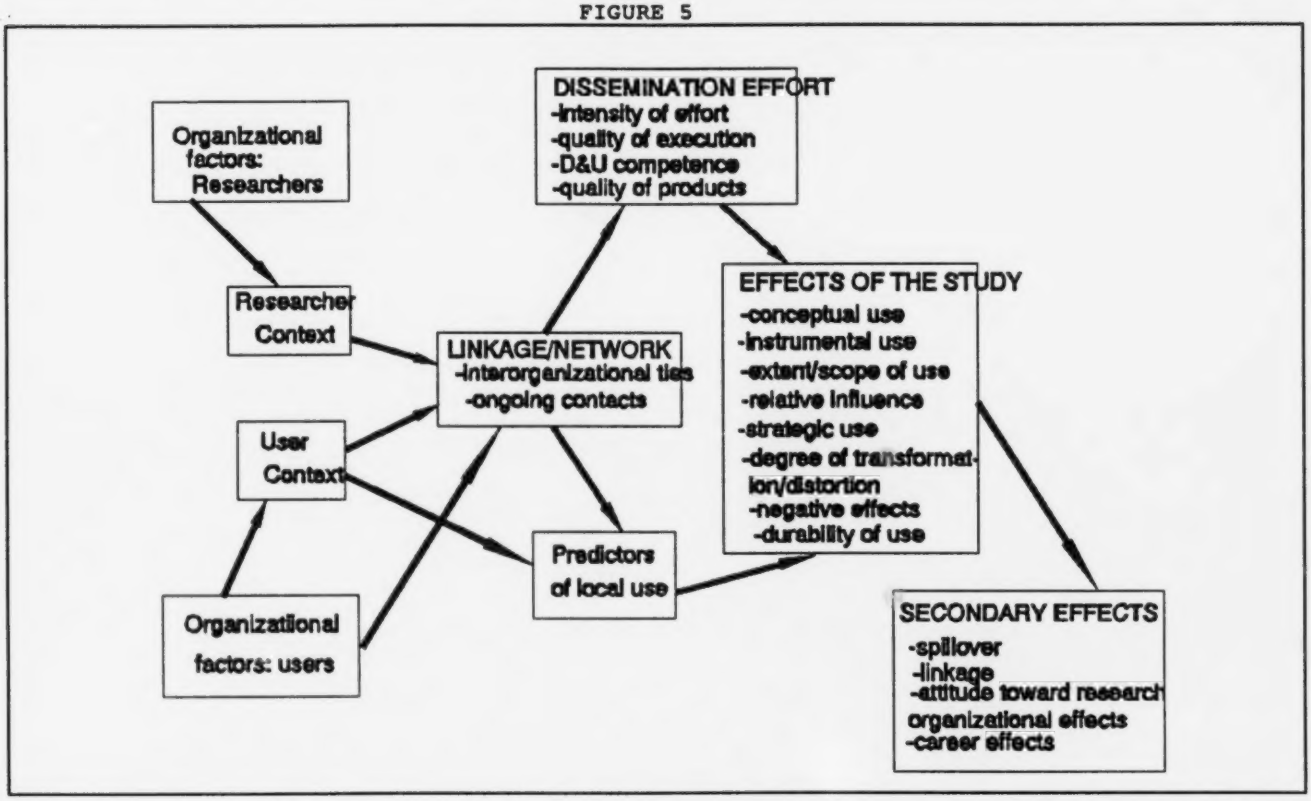
In the next study reviewed, Michael Huberman developed a series of models to depict the process of research utilization (Huberman, 1987, 1990). He developed a "general model" which integrates his other models, which were: 1) an "organizational model: researchers" (showing how researchers influence the dissemination and utilization process), 2) an "organizational model: users" (showing how users of research are influenced by dissemination effort and the "predictors of local impact/use), and 3) a "dissemination effort model (which showed the sets of variables affecting dissemination efforts). Huberman's general model is shown in Figure 5 (from Huberman, 1987, 1990).

An can be seen in the figure, Huberman's explicit cause-model is by far the most extensive of the models reviewed here. The model was used to depict the causal process operating in a series of local projects that were part of a "national program" created by the Swiss National Research Council. In the 1987 article, the projects were ongoing and the "integrative" models were used as preliminary depictions of project processes. In the 1990 article, the projects had been completed, and Huberman used a "multiple-case, tracer study" design. Basically, Huberman followed the eleven projects (from a population of 25 projects) from beginning to 18 months after completion.

Huberman's results showed, empirically, that linkages between

researchers and practitioners were important for utilization (especially conceptual). Furthermore, he found that new collaborative relationships frequently developed as a result of practitioner participation in the evaluation. It was important that practitioners participated in the evaluation before its conduct, during its conduct, and at the end. Participation during the ongoing evaluation was especially important.

FIGURE 5



The last explicit cause-model reviewed here was developed and empirically tested in 1980 by Knowlton Johnson. In many ways, Johnson's research is similar to the present study. That is, he developed a model from the empirical and theoretical literature and he attempted to empirically verify the model. This is the only path analytic study of evaluation utilization that was found in the utilization literature. To empirically

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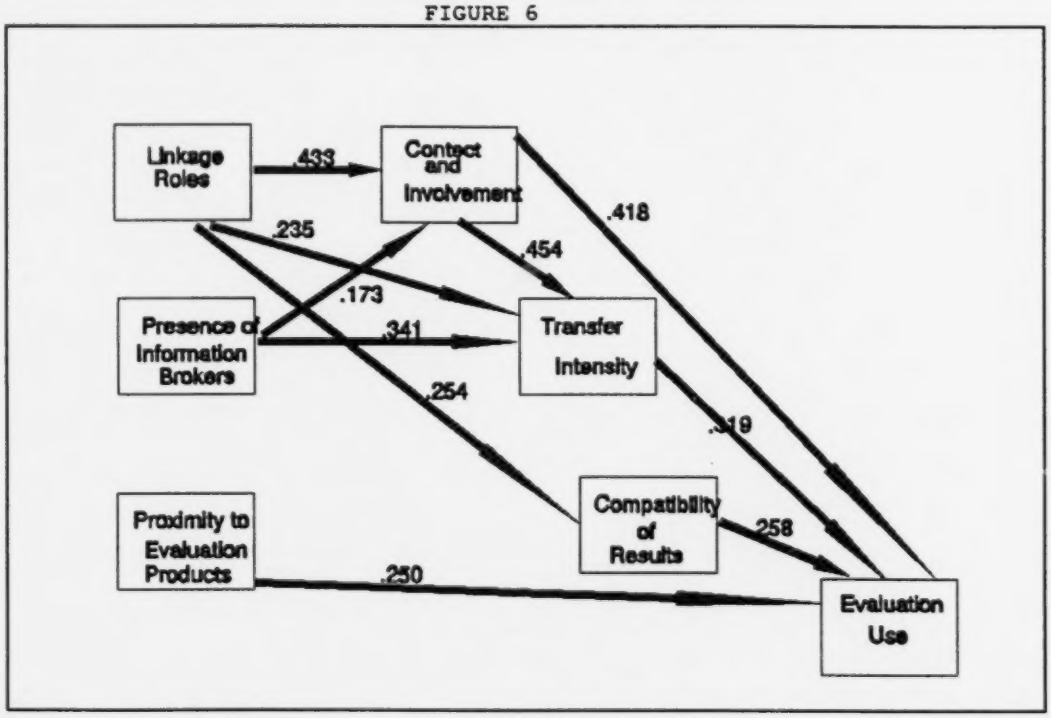
test the model, Johnson, collected data from 75 decision makers who worked for 25 organizations. The decision makers has been exposed to "1 or 2 of 19 evaluation products produced by university personnel and students" (Johnson, 1980). In-person interviews and paper-and-pencil questionnaires were used for data collection.

Johnson's model is shown in Figure 6 with the beta weights on each arrow. Each beta weight shows the standard deviation change in the variable receiving the arrow (i.e., an endogenous variable) given a one standard deviation change in the causal/independent variable.

As seen below, contact and involvement was the most important influence on evaluation use (using weights as the "relative importance" indices). Transfer intensity and compatibility of results also had direct influences on evaluation. Linkage roles had a clear indirect influence on evaluation use through direct effects on two intervening variables of evaluation use (i.e., transfer intensity and compatibility of results).

FIGURE 6



The Proposed Theoretical Model

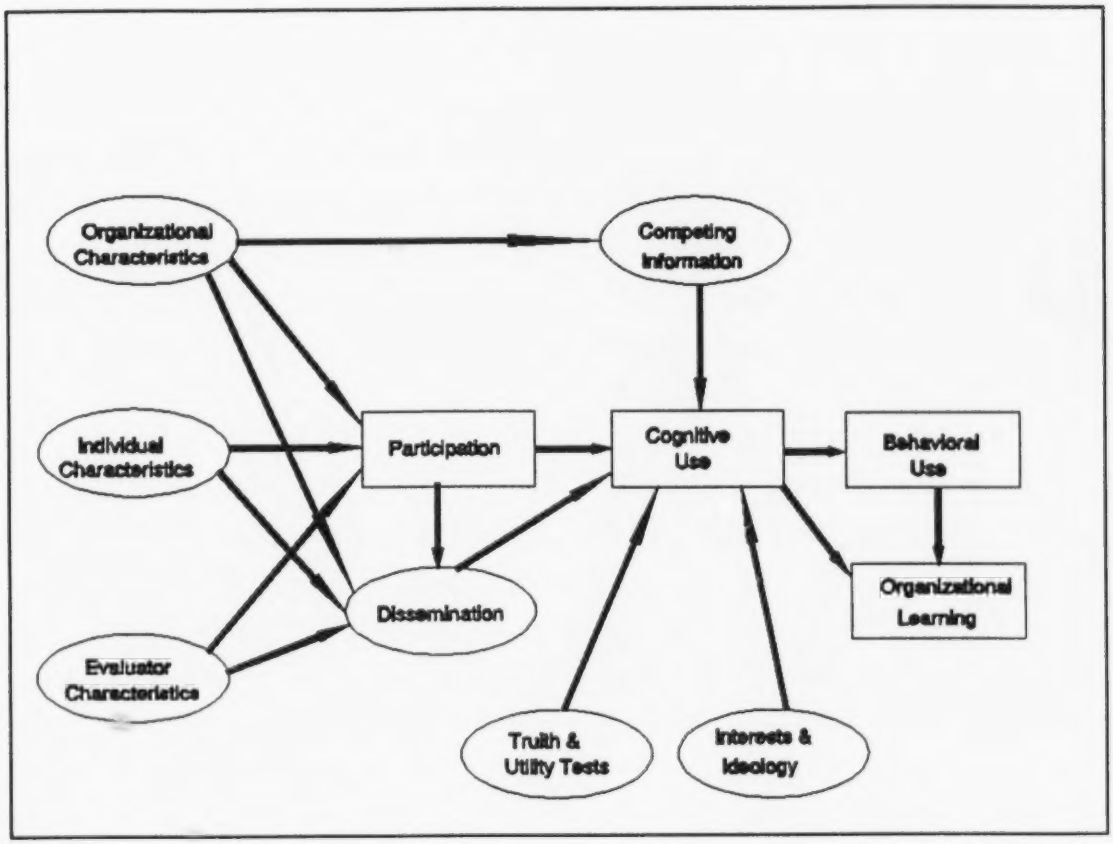
In reviewing the implicit and explicit models of evaluation utilization, several key categories seemed to emerge as facilitators of utilization. Participation by program participants/practitioners consistently seemed to be important. Some properties of participation seem to include type of participation (e.g., autocratic or democratic) and degree of participation (varying from great to small). Organizational process and communication also seemed to be influential. Possible properties or subcategories here are quality of communication (clear/not clear), timeliness of communication, and dissemination (e.g., was feedback given during the program or at the end as in a traditional report), and type and direction of communication (vertical, horizontal, and diagonal). Feedback, which is probably part of the communication variable just listed, also appeared to be important (e.g., dimensions could be timeliness, frequency, and consensus building). Politics and self-interested decision making were important utilization factors (e.g., including self-interest, ideology, utility, and power). Use management was another important variable (e.g., evaluability assessment, appropriate methodology, management commitment).

Finally, a multiple conceptualization of the outcome variable (evaluation utilization) seemed useful, with cognitive use and behavioral use being especially important. This conceptualization of cognitive and behavioral use seems more in line with social psychological theory. Specifically, cognitive awareness of an evaluation will precede behavior resulting from the evaluation (unless one wishes to consider unconscious processes). Cognitive use is viewed as including awareness of the evaluation and the development of attitudes, beliefs, and opinions about a program as a result of an evaluation; these cognitive schema may affect behavior toward particular programs being evaluated or behavior toward future programs via enlightenmnt. Behavioral use involves action, and is closely aligned with instrumental use, but may also include symbolic use and legitimative use (Owen, 1992).

It seems clear that evaluation usage is a continual process that evolves and changes shape over time. Models showing relationships among variables, therefore, are needed, and should, if possible, allow for change and temporal development. The general theme from the meta-modeling analysis done here goes like this: evaluation utilization is a continual and diffuse process that is dependent on local contextual, organizational, and political dimensions, but participation by program stakeholders and continual (two-way) feedback of results between evaluator and user seems especially helpful in increasing use by increasing evaluation relevance, modification of the evaluation, and stakeholder ownership of results. Strauss and Corbin (1990) call a general theme, like this, a "story line."

The model resulting meta-model is shown in Figure 7 (on the following page). Several concluding observations can be made about this explicit cause-model. Participation is hypothesized to be influenced by three variables: organizational characteristics, stakeholder/individual characteristics, and evaluator characteristics. In particular, participation is expected to be highest for organic organizational forms (as contrasted with mechanistic), for change-oriented individuals (as contrasted with "bureaucratic" individuals), and for person-focused evaluators (as contrasted with research-focused). Dissemination is affected by participation and by the three variables affecting participation. In an organic organization, informal networks are common and resulting is a good deal of "grapevine" dissemination. A research-focused evaluator will likely view a final report as sufficient, while a person-focused evaluator will likely view informal communication before, during and after an evaluation as useful. Finally, change-oriented individuals will become more interested in the evaluation (because it may represent positive change) and therefore, informally and formally disseminate information and results.

FIGURE 7



Definitions of variables in Figure 7.

Behavioral use.
Once becoming aware of an evaluation, behavior or action may result. This behavior may include instrumental, symbolic, and/or legitimative uses.

Cognitive use.
Degree to which people involved in or directly related to the program are aware of the evaluation, think about the information, and form attitudes, beliefs, and opinions about the program being evaluated.

Competing information.
Information load in organization that may affect decisions about the program being evaluated: 1) low amount of directly competing information, and 2) high amount of directly competing information.

Dissemination.
Involves communication of information. This may take place purposely, e.g., via reports and meetings, or it may take place informally via social networks.

Evaluator characteristics.
The two types are person-focused and research-focused. The person focused evaluator identifies a change agent at

the beginning and works with this person throughout, making sure that the evaluation answers questions users want answered.

Individual characteristics.
Two types of individuals are identified: 1) change seekers, who like to be involved in new programs and enjoy learning and change, and 2) ritualists, who have a "bureaucratic personality," i.e., they like following rules and procedures and don't seek much change.

Interests and ideology.
Is it in the potential users' self-interest to use evaluation results and recommendations? Measured by it "is in his/her interest" or "is not in his/her interest."

Organizational characteristics.
Organic versus mechanistic types. An organic organization is a relatively flat organization with high levels of vertical and horizontal communication. Power is more in ideas and performance than in position. A mechanistic organization is the traditional Weberian bureaucracy where power is located in the position and communication travels chains of command shown in an organization chart (see Tosi, 1992).

Participation.
To what degree (on a ten point scale) people involved in or directly related to the program participate in design and conduct of the evaluation, and in dissemination of results.

Truth and utility tests.
Do potential users believe evaluation results and that the evaluator is credible, and is the information seen as useful in the person's job. Measured by viewed as "true or useful" versus viewed as "neither true nor useful."

Organizational learning.
Involves adjustment on the part of the program or organization, including, for example, changes in the culture, strategy, structure, stories, myths, norms, etc.

Cognitive use is shown to be directly influenced by "truth and utility testing," consideration of personal "interests and ideology," and "competing information" flowing through the organizational environment (Weiss, 1980; Cousins & Leithwood, 1986). The three variables influencing participation are hypothesized to affect cognitive use indirectly through participation and dissemination processes operating within an organization and by a competing informational environment. The type of organization, for example, affects the nature of participation (who does what, who talks to whom, and who can make decisions) resulting in different degrees and types of utilization. In a tightly coupled mechanistic organization many potential stakeholders may not be aware of the conduct of an evaluation--they never participated, to any degree, and they never reached the first step of the utilization process, i.e., awareness. Given a mechanistic structure, it may not be in non-participators' interests to participate because of their lack of power and continued intense job specialization.

Finally, organizational learning is shown in the model to result from cognitive use and behavioral use. It is well know that organizations change and learn over time (e.g., Fiol & Lyles, 1985; Frey, 1990), and utilization (e.g., cognitive and behavioral) should affect this process (Cousins & Earl, 1992). In effect, social constructions of reality in organizations and programs may change as a result of a program evaluation (cf. Pitre & Sims, 1987; Bandura, 1986; Gergen, 1985; Berger & Luckmann, 1967). As participation increases, it is hypothesized that use and organizational learning will occur. People often enjoy being part of an organizational/program change process and will, therefore, pay attention during the evaluation process (Pasmore & Fagans, 1992; Johnson, 1992b, Neumann & Hare, 1988).

It is suggested that future research continue the modeling process as done here and elsewhere (e.g., Johnson, 1980; Huberman, 1987). This may, perhaps, result in more holistic thinking and more explanatory utilization studies. Tosi (1992) offers a nice exemplar for recent model building, modeling the operation of person, group, organizational, and environmental factors.

It is also suggested that future research explore potential contributions from social science theory (Chen & Rossi, 1987). As an example, we might explore what drives the behavior of individual actors and stakeholders. The importance of political concerns are already well established (e.g., Chelimsky, 1987; Weiss, 1984). We might, however, consider using additional theory such as Homans' (1974) and Blau's (1964) "exchange theory" which suggests that within organizations people "make deals" and social exchanges. Social exchange is probably one of the bases of the political processes so frequently identified in the literature. Add to this the economic concept of "rational self interest" and we further see what motivates actors. The resistance to change literature may add insight into tendencies operating for order and for change within individuals (e.g., Neumann, 1989; Johnson, 1992b; Klein, 1984; Coch & French, 1948). Moving to a slightly higher level of abstraction we see that people in organizations are

constantly performing expected behavioral patterns associated with their roles or positions; on the other hand, behavior is also fluid and emergent as expectations develop within specific situations. Finally, the literatures on constructivism and constructionism may help explain how different constructions of reality develop and operate in different organizations and programs (cf. Gergen, 1985; Guba & Lincoln, 1989; Attewell, 1990; Shrum, 1988; Bohan, 1990; von Glasserfeld, 1984, 1988).

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